

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-017601**Date Inspected:** 24-Oct-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Li Yang**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG Segments**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, Dan Hernandez was present during the times noted above to observe the fit up, welding and related activities associated with the fabrication of the San Francisco Oakland Bay Self Anchored Suspension Bridge at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

Mechanical Test Weld Lab

This QA Inspector observed the following mechanical tests for Procedure Qualification Records (PQR) using the Flux Cored Arc Welding (FCAW) process. The PQRs were performed using ESAB E71T-1M Dual Shield 70 Ultra Plus electrode:

PQR HP2010120-1 (2F)

PQR HP2010121-1 (3F)

Macro etch (2 samples)

PQR HP2010117-2 (1G)

Macro etch (3 samples)

Reduced Section Tension Test (2 samples)

All Weld Metal Tension Test (1 sample)

Side Bend Test (4 samples)

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Charpy V-Notch (CVN) Impact Test (5 samples)

OBG Trial Assembly Yard

Segment 11BW/11CW

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated SP141-001-054, Side Plate WT stiffener web splice. The welder is identified as #040656 and was observed welding in the 3G (vertical) position using approved Welding Procedure Specification WPS-B-P-2213-B-U2-FCM-1.

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated SP114-001-063, Side Plate WT stiffener web splice. The welder is identified as #046704 and was observed welding in the 3G (vertical) position using approved Welding Procedure Specification WPS-B-P-2213-B-U2-FCM-1.

This QA Inspector observed Shielded Metal Arc Welding (SMAW) in progress of a Complete Joint Penetration (CJP) weld joint. The Weld joint is designated SP782-001-008, Side Plate WT stiffener web splice. The welder is identified as #040611 and was observed welding in the 3G (vertical) position using approved Welding Procedure Specification WPS-B-P-2213-B-U2-FCM-1.

For the above mentioned welding activities ZPMC Quality Control (QC) Inspector is identified as Zhou Peng. The welding variables recorded by QC appeared to comply with the Applicable WPS.

QA Verification

This QA Inspector performed Magnetic Particle Testing (MT) of approximately 15% of the area previously tested and accepted by ZPMC MT personnel. The following items were tested:

10CE

FL3 I-rib stiffener hold back fillet welds

SSD16-PP092-168

SSD16-PP092-169

SSD17-PP093-164

SSD17-PP093-165

SSD18-PP094-171

SSD18-PP094-172

FB020-005-013

FB020-005-014

FB020-005-015

FB020-005-016

FB020-005-017

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FB020-005-018
FB024-009-013
FB024-009-014
FB024-009-015
FB024-009-016
FB024-009-017
FB024-009-018
FB028-010-013
FB028-010-014
FB028-010-015
FB028-010-016
FB028-010-017
SEG064D-022
SEG064D-023
SEG064D-068
SEG064D-069
SEG064D-086
SEG064D-087
SEG064D-095
SEG064D-096
SEG064D-187
SEG064D-188
SEG064D-158
SEG064D-159
BP026-014-042
BP026-014-043
BP026-014-040
BP026-014-041
BP026-014-038
BP026-014-039
BP026-014-032
BP026-014-033
BP026-014-030
BP026-014-031
BP026-014-026
BP026-014-027

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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PQR HP2010117-2
Side Bend Test



10/24/2010 0949

PQR HP2010117-2
Macro etch Test



10/24/2010 0951

PQR HP2010117-2
Charpy V-Notch (CVN) Impact Test



10/24/2010 1022

PQR HP2010121-1
Macro etch Test



10/24/2010 1005

PQR HP2010117-2
Reduced Section Tension Test



10/24/2010 0931

PQR HP2010117-2
All Weld Metal Tension Test



10/24/2010 0938

Summary of Conversations:

No relevant conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang, 150-0042-2372 , who represents the Office of Structural Materials for your project.

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Inspected By:	Hernandez,Dan	Quality Assurance Inspector
Reviewed By:	Dsouza,Christopher	QA Reviewer
